



Tuesday, 13 November 2007 - Workshop

Part 1: Traditional Sync Topics

08.30 Registration

09:30 Chairman's Welcome and Introduction
Charles Curry, Managing Director & ITSF Chair,
Chronos Technology Ltd, UK

Introduction

Workshop Chair: *Chris Farrow*, Chronos Technology Ltd, UK

09:35 Modelling Packet Delay in Ethernet and IP Networks
Dominik Schneuwly, Senior Engineer, Oscilloquartz, Switzerland

10.05 Primary Reference Clocks
Mike Garvey, Chief Technical Officer, Symmetricom, USA

10.30 Refreshments

10.45 Global Navigation Satellite Systems (GNSS)
Marc Weiss, Timing & GPS Expert, NIST, USA

11.10 Galileo PRS for Network Synchronisation and Timing Applications
Alan Kendall, Project Manager, EADS Astrium, France

11.35 Timing Measurement Fundamentals
Lee Cosart, Technical Consultant, Symmetricom, USA

12.00 Lunch

13.10 Synchronisation in Telecom Networks
Jean-Loup Ferrant, Synchronization Expert, Alcatel-Lucent, France

13.35 Zarlink Semiconductor G.823 and G.824
Silvana Rodrigues, System Architect, Zarlink Semiconductor, Canada

Part 2: Packet Networks (sync oriented) Tutorial

14.00 Introduction
Chair: *Silvana Rodriguez*, System Architect, Zarlink Semiconductor, Canada

14.05 An Introduction to Packet Switching for Sync Engineers
Stewart Bryant, Technical Leader, Cisco Systems, UK

14.30 Refreshments



- 14.45** **Tutorial and Major Differences Between NTP and 1588**
Karen O' Donoghue, USN, USA
- 15.10** **Introduction to Internet QoS**
Fred Baker, Cisco, USA
- 15.35** **Introduction to MPLS**
Matthew Bocci, Director of Technology & Standards, Alcatel-Lucent, UK
- 16.00** **Close of Workshop**

Ice Breaker Reception – The Royal Greenwich Observatory

- 16.45** Guests to embark the Erasmus at the Embankment Pier
- 17.00** Boat (Erasmus) Departs
Finger Buffet will be served on board with a Cash Bar
- 18.00/18.15** Guests to disembark at Greenwich Pier
- 18.15** Guests board the coach to The Royal Observatory Greenwich
- 18.30** Tour of The Royal Observatory Greenwich
- 19.30** Planetarium Show by astronomer Greg Smye-Rumsby
- 19.55** Coach Departs for Savoy Place
- 21.15** Arrive at Savoy Place



Wednesday, 14 November 2007 – Day 1

Session 1: Introduction and Welcome

08.00 Registration

08.30 Welcome and Introduction

Charles Curry, Managing Director & ITSF Chair,
Chronos Technology Ltd, UK

08.40 Keynote Address

Timing Needs in 2020

Andy Reid, BT, UK

Session 2: Applications (Case Studies, Evolution, Services)

09:25 Introduction

Chair: *Martin Kingston*, Principal Engineer, Orange UK

09.35 Overview of Future Sync Applications and Architecture Challenges

Sébastien Jobert, R&D Engineer, France Telecom, France

10.05 Synchronisation Issues from Packet Encapsulation to Air Interface in DVB-T2

Gilles Boime, Technical Manager, Spectracom, France

10.35 Refreshments

Sponsored by:



11.05 Network/Content Synchronisation for MBSFN Transmission in 3GPP Networks

Derek Richards, Consultant, IP Wireless, UK

11.35 Time and Timing Issues within the Wireless Application Home Environment

Hugh Melvin, Dept. of Information Technology, National University of Ireland, Ireland

12.05 Global Time for Overcoming Internet Challenges: Scalability with Guaranteed Performance

Prof Yoram Ofek, Dept. of Information and Communication Technology,
University of Trento, Italy

12.35 Lunch

Session 2: Applications (Case Studies, Evolution, Services continued)

14.00 Introduction

Chair: *Michael Mayer*, Manager, Advanced Networks, Nortel Networks, Canada



14.10 Keynote Address

Timing at the Turn of the (Last) Century

David Rooney, Greenwich Observatory Museum, UK

14.40 Synchronisation in Future VF Mobile Networks

Max Gasparoni, Assistant Chief Engineer, Vodafone Group Services Ltd, UK

15.10 The Most Expensive GPS-Antenna Installation Ever? Testing Multiple GSM-R-Rings Deep Inside a Mountain

Tomas Johansson, Transmission Engineer, Banverket, Sweden

15.40 Refreshments

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Session 3: Technology (including Standards, Sync Distribution, Time and Timing)

16.10 Introduction

Chair: *Ghani Abbas, Consultant, Ericsson, UK*

16.20 NGN Standards

Stefano Ruffini, Product Manager, Ericsson, Italy

16.50 eLoran: Reliable Timing at the Edge?

Dr Sally Basker, Director of Research & Radio Navigation, General Lighthouse Authorities, UK

17.20 IEEE 1588 in Mobile Networks - Migration Scenario

Antti Pietilainen, Senior Specialist, Nokia Siemens Networks, Finland

17.50 End of Day 1

19.00 Conference Dinner

The IET, Riverside Room, London

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19.00 Pre-Dinner Drinks

19.30 Dinner



Thursday, 15 November 2007 – Day 2

Session 3: Technology (including Standards, Sync Distribution, Time and Timing)

- 08:30 Introduction**
Chair: *Dave Tonks*, Principal Engineer, Semtech, UK
- 08:35 Synchronous Ethernet**
Jean-Loup Ferrant, Senior Engineer, Alcatel-Lucent, France
- 09:00 SLA Monitoring in Next Generation Networks**
Charles Barry, CEO & Founder, Brilliant Telecom, USA
- 09:25 Timing Measurements in Packet Networks**
Lee Cosart, Engineering Technical Consultant, Symmetricom, Inc, USA
- 09:50 A New Primary Standard, Affordable From Core to Edge**
Dominic Mikulin, OptiSynx, UK
- 10:15 Delivering Better Time-of-Day Using a Synchronous Ethernet and 1588**
Yaakov Stein, Chief Scientist and *Alon Geva*, Timing Solutions Team Leader, RAD Data Communications Ltd, Israel
- 10:40 Refreshments**

Session 4: Infrastructure (Architecture, Solutions for the Future)

- 11:10 Introduction**
Chair: *Phil Mann*, VP EMEA, Symmetricom, Inc, USA
- 11:15 Enabling Two Worlds to Collide - Packet & Timing**
Tommy Cook, CEO, Calnex Solutions Ltd, UK
- 11:40 Advanced Features of Network Emulators for Sync Applications**
Charles Webb, CTO, Anue Systems, Inc, USA
- 12:05 Deployment Considerations for IEEE1588 in Telecommunication Networks**
Tim Frost, Principal Technologist, Symmetricom, Inc, USA
- 12:30 Lunch**

Session 4: Infrastructure (Architecture, Solutions for the Future continued)

- 13:45 Introduction**
Chair: *Ian Wright*, Network Team Leader, Sky Network Services, UK
- 13:55 ITU-T Architecture Standards and Impacts to Network Operations**
Michael Mayer, Manager, Advanced Networks, Nortel Networks, Canada



- 14:25 Modelling Packet Delay Variation in Ethernet and IP Networks**
Dominik Schneuwly, Senior Engineer, Oscilloquartz SA, Switzerland
- 14:55 An Analysis of Different Technology Scenarios for SLA Development and Sync Transport in NGNs**
Chris Farrow, Technical Manager, Chronos Technology Ltd, UK
- 15:25 Carrier Scale Solutions to the Infrastructure Problem**
Mike Gilson, Lead Technology Consultant, BT, UK
- 15:55 Network Metrics for Timing over Packet**
Dave Tonks, Semtech, UK
- 16:25 Panel Session**
- 16:55 Closing Remarks**
Charles Curry, Managing Director, Chronos Technology Ltd, UK
- 17:00 Conference Close**